Weather and Climate

Bering Land Bridge Winter 2013-2014 Weather Summary

Was Winter 2013 Normal?

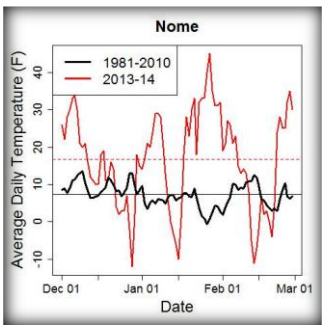
No. It was a warm winter in Nome. All three months (December – February) experienced substantially higher temperatures than normal. The average monthly temperature of 21° F in January was more typical of mid-April temperatures. Despite above average precipitation, warm temperatures prevented much snow from accumulating in early December and for the month of February.

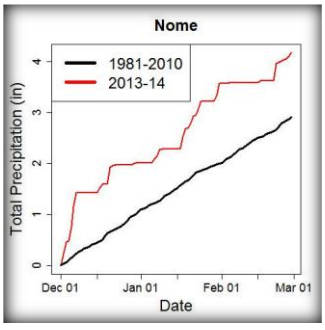
In Nome, December was warm and very wet. The average temperature for December was 14.3° F, which is 4.8° F warmer than normal. Temperatures were well above normal for the first three weeks of the month, before colder air returned Dec. 22-28. The total precipitation for the month was 2.01 inches, 186% of normal. Most of the precipitation came during the first week of the month, with daily records being broken on the 2nd (0.24 inches) and 6th (0.39 inches). The heavy rain during this week led to the demise of almost all of the snowpack. Heavy snowfall near the solstice returned snow depth values to near normal conditions by the end of the month.

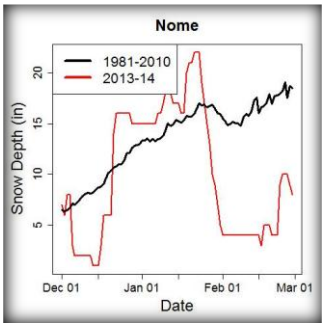
It was the 5th warmest January in Nome since records began in 1909. A high pressure system to the west of Nome pumped in warm air from the tropics. A high temperature of 51° F (typical for June) on January 26, crushed the previous January record (46° F, set on January 7, 1942). The pressure gradient that brought warm air also resulted in higher than normal wind speeds. 63 mph winds on the 17th set an all-time high. The snowpack held on for most of the month with significant storm totals January 6-8 and 17-21. However, warmer temperatures and rain the last week of the month melted almost all of the snow.

The warmth continued the first ten days of February with temperatures between 5° and 20° F warmer than normal and little precipitation. Mid-month temperatures were near average and dry. February ended up at only 65% of normal precipitation. Overall, this winter was an astounding 9.0° F warmer than normal.

Nome – Average air temperatures, cumulative precipitation, and snow depth 2014 (red) compared to normal (black).







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Nome Weather Records:
Climate Normal Period 1981 – 2010
Climate Record Period 1906 – 2013

Temperature

Winter 2013-2014	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
December	14.3	9.5	**+4.8**	37 / Dec 7	-20 / Dec 29
January	21.3	5.2	**+16.1**	51* / Jan 27	-17 / Jan 15
February	13.6	7.4	**+6.2**	37 / Feb 27	-17 / Feb 13

Winter Season Temperature Departure from Normal: +9.0°F
*January High Temperature Record

Precipitation

Winter 2013-2014	Total Monthly Precip in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 –hr total in. / Date	# Days with >=0.01 in. water
December	2.01	1.08	**+0.93**	0.39 / Dec 6	13
January	1.57	0.94	**+0.63**	0.24 / Jan 31	13
February	0.60	0.93	**-0.33**	0.34 / Feb 22	9

Winter Season Departure from Normal: +0.41 inches

Snowfall

Winter 2013-2014	Total Monthly SnowWinter in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 –hr snowWinter total in. / Date	Cumulative snowWinter since 1-July in.	Normal SnowWinter from July 1 in.
December	18.4	14.5	**+3.9**	6.5 / Dec 20	33	31.4
January	12.2	12.7	**-0.5**	3.5 / Jan 17	45.2	44.7
February	9.1	12.2	**-3.1**	5.0 / Feb 22	54.3	57.5

We now have additional NPS climate stations in Bering Land Bridge that complement the long-term record available from the National Weather Service station in Nome. The new NPS stations will provide critical data along a north south transect across the Seward Peninsula that will help characterize the climate gradients and patterns affecting resources in Bering Land Bridge National Preserve.

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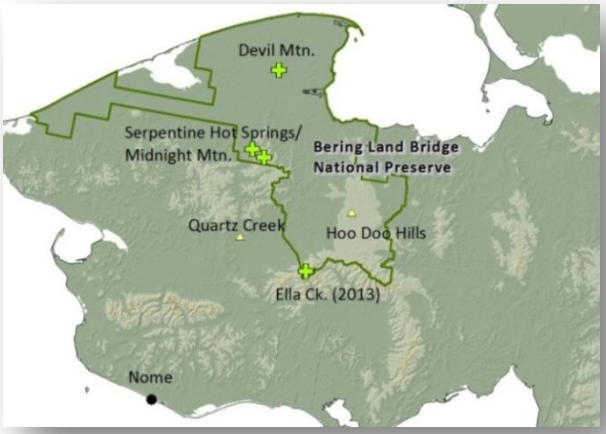

Bering Land Bridge Preserve RAWS weather summaries — Fall 2013:

Site	Elev. Ft.	Average Temp °F Dec	Jan	Feb	Winter 2013 Avg Temp °F	Extremes °F High	Low	Peak Wind mph	High T-Low T °F *
Devil Mountain	285	M	16.5***	7.1	M	40	M	42	M
Serpentine	518	8.3	17.0	7.2	10.8	53	-32	48	76
Ella Creek	2258	9.1	17.3	6.3	10.9	55	-33	83	88
Quartz Creek	321	7.7	16.9	7.9	10.8	46	-30	51	76
Hoo Doo Hills**	1550	6.3	13.6	2.1	7.3	39	-30	24*	69

* Difference between the high and low temperature for the season. **Suspect low max wind speeds from HooDoo
**Missing 4 days of data at Devil Mtn in January.

Interesting notes from RAWS stations:

- This winter's peak wind gust of 83 mph at Ella Creek occurred the morning of January 5. Last winter the peak wind gust occurred at Ella Creek on January 29 with a 92 mph speed.
- February 11-16 was cold and windy throughout the Seward Peninsula, particularly in exposed locations. Ella Creek recorded sustained winds of 25-30 mph on February 14, air temperatures between -25 to -30° F, and a minimum wind chill of -62° F.
- Hoo Doo Hills at 1550 feet elevation, had the coldest average temperature for winter 2013-2014.
- At all sites, the highest winter temperature occurred on January 27. This is the same date that Nome recorded a new record high temperature for January (records in Nome began in 1909).

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Climate station at Ella Creek

Please Note: The summarized data are preliminary and have not undergone final quality control. Therefore, these data are subject to revision.

Connecting Further

New paper published Recent sea ice increase and temperature decrease in the Bering Sea area, AK

Previous weather summaries and other climate monitoring documents on the Arctic Network web portal

Access near real-time data from Western Regional Climate Center and MesoWest

Check out the April-May-June weather outlook from the NOAA Climate Prediction Center

Statewide summary of weather highlights in the latest Alaska Climate Dispatch from the Alaska Center for Climate Assessment and Policy

Map of projected temperature and precipitation changes for Bering Land Bridge National Preserve.

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